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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,563	08/28/2003	Chandra V. Mouli	MIO 0104 VA	7597

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DINSMORE & SHOHL LLP
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Dayton, OH 45402-2023

EXAMINER

OWENS, BETH E

ART UNIT	PAPER NUMBER
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2824

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,563

Applicant(s)

MOULI, CHANDRA V.

Examiner

Beth E. Owens

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/28/03
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-58 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ -Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

- I. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-31, drawn to the method of manufacturing, classified in class 438, subclass 652.
 - II. Claims 32-34, drawn to the method of manufacturing, classified in class 438, subclass 268.
 - III. Claims 35-49, drawn to the device, classified in class 257, subclass 408.
 - IV. Claims 50-56, drawn to the device, classified in class 257, subclass 344.
 - V. Claims 57-58, drawn to the process of using the device, classified in class 365, subclass 1+.

The inventions are distinct, each from the other because of the following reasons:

Inventions Groups I, II and Groups III, IV are related as the process of making and the product made, and Group V is the process of using the product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process [MPEP §806.05 (f)]. For example, the conductor for the semiconductor substrate in Group III could be formed in a lateral direction with the first conductive and second conductive layers adjacent each other through a patterning sequence, unlike the

stacked layering in Group I. Because these inventions are distinct for the reason given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

2. This application contains claims (4-6, 9-11, 13-18) directed to the following patentably distinct species of the claimed invention:

embodiment 1: the first conductive layer is deposited with a first dopant in situ and the second conductive layer is deposited with a second dopant in situ; claims 6, 11, 13, 18.

embodiment 2: the first conductive layer is deposited and then implanted with a first dopant and the second conductive layer is deposited on the first doped conductive layer and then implanted with a second dopant; claims 4, 5, 14, 17.

embodiment 3: the first conductive layer is deposited with a first dopant in situ and the second conductive layer is deposited on the first doped conductive layer and then implanted with a second dopant; claims 5, 6, 13, 17.

embodiment 4: the first conductive layer is deposited and then implanted with a first dopant and the second conductive layer is deposited with a second dopant in situ; claims 4, 11, 14, 18.

embodiment 5: the first conductive layer is deposited and the second conductive layer is deposited on the first conductive layer and then the first conductive layer is implanted with a first dopant through the second conductive layer; claim 10.

embodiment 6: the first conductive layer is deposited and the second conductive layer is deposited on the first conductive layer with the first dopant in situ; claims 9, 15-18.

If Applicant elects the Inventions of Group I (method of manufacturing, subclass 652, claims 1-31), Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, Claim 1 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered — — — — — nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37

CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth E. Owens, Ph.D. whose telephone number is 571.272.1882.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms, can be reached on 571.272.1869. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9306 for official communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571.272.2800.

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Art Unit: 2824

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A handwritten signature in black ink, appearing to read 'Anh Phung', written in a cursive style.

**ANH PHUNG
PRIMARY EXAMINER**